

The Claims

What is claimed is:

1. A process for the preparation of an evaporated milk product whose organoleptic qualities are similar to those of fresh milk, which comprises:

mixing a whey product with fresh whole milk to form a lactic solution;
pasteurizing and concentrating the lactic solution to form a concentrate;
thermally treating and homogenizing the concentrate; and
cooling, packaging and sterilizing the concentrate as the evaporated milk product.

2. The process of claim 1, wherein the lactic solution is concentrated by evaporation.

3. The process of claim 1, wherein the whey product includes up to 50% by weight of lactose.

4. The process of claim 1, which further comprises forming the whey product by dissolving whey solids in an aqueous medium in which free Ca^{2+} ions are buffered with a calcium-sequestering agent.

5. The process of claim 1, which further comprises forming the whey product by dissolving, in a first stage, whey solids in an aqueous medium that includes carrageenan and a calcium-sequestering agent at a temperature of about 30 to 65°C for a time sufficient to allow the whey solids to moisten, and mixing the milk and the whey product in a second stage.

6. The process of claim 5, wherein the whey solids are allowed to moisten for a time period of 10 min to 4 h, and the milk and whey product are mixed together at a temperature of about 30 to 65°C.

7. The process of claim 5, wherein the dissolution of the carrageenan and sequestering agent takes place batchwise, in that the carrageenan is first dissolved in cold water, the sequestering agent is dissolved separately before being placed in a vessel containing all the water and comprising a mixer, with moderate stirring at a temperature of about 60 to 65°C.

8¹/₈. The process of claim 5, wherein the dissolution of the whey solids in the aqueous solution takes place in a vessel batchwise by recirculation of the aqueous solution through a powder dispenser that delivers whey powder.

9¹/₈. The process of claim 1, wherein fats are incorporated in the lactic solution in the presence of lecithin at a temperature of 60 to 65°C.

10¹/₈. The process of claim 7, wherein the fats include butter oil or vegetable oils.

11¹/₈. The process of claim 1, wherein the concentrate is subjected to a two-stage homogenization at a temperature of 70 to 75°C, the first stage being at a pressure of 190 to 210 bar and the second at about 30 to 50 bar.

12¹/₁₀. The process of claim 1, wherein fresh whole milk is used as starting material, the whey product is dissolved directly in the milk and in that an additional homogenization of the concentrate is carried out prior to or after the thermal treatment.

13¹/₁₁. The process of claim 1, wherein up to 0.15% by weight of sequestering agent is added to the thermally treated and homogenized concentrate, in that containers are then filled with the evaporated milk product, and in that the filled containers are hermetically closed, preheated to 95-97°C and then sterilized for 12 to 15 min at 115-122°C.